

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	46	Schmidt NEAR ann	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/01/11 15:08
L2	7	tumor ADJ invasion ADJ assay	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/01/11 15:08
L3	546	(cell ADJ migration ADJ assay) and (tumor cancer)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/01/11 15:17
L4	176	Ruoslahti NEAR Erkki	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/01/11 15:10
L5	3	I4 and (membrane NEAR invasion)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/01/11 15:13
L6	20	I4 and (tumor NEAR invasion)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/01/11 15:13
L8	435	I3 and (tumor WITH inhibit\$4)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/01/11 15:17
L9	11998	(invasion migration) SAME (tumor cancer)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/01/11 15:19
L10	1148	(invasion migration) SAME (tumor cancer) SAME (amphoterin cadherin integrin hyaluronic)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/01/11 15:20
L11	501	(invasion migration) WITH (tumor cancer) WITH (amphoterin cadherin integrin hyaluronic)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/01/11 15:22
L12	273	(invasion migration) WITH (tumor cancer) WITH (integrin)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/01/11 15:22
L13	4	(invasion migration) WITH (tumor cancer) WITH (integrin).clm.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2005/01/11 15:22

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(FILE 'HOME' ENTERED AT 15:24:43 ON 11 JAN 2005)

FILE 'MEDLINE, CAPLUS' ENTERED AT 15:24:57 ON 11 JAN 2005

L1 2307303 S TUMOR OR NEOPLAS? OR TUMOUR OR CANCER
L2 2275423 S INVAS? OR MIGRATION OR GROWTH
L3 282445 S L1 (L) L2
L4 107661 S L3 AND INHIBIT?
L5 3429 S L4 AND (INTEGRIN OR AMPHOTERIN OR CADHERIN OR HYALURONIC)
L6 937 S L5 AND PY<=1998
L7 197 S L6 AND ASSAY
L8 149 S L7 AND INTEGRIN
L9 149 FOCUS L8 1-
L10 98 S L9 AND (A(L) INTEGRIN)

L11 ANSWER 10 OF 98 CAPLUS COPYRIGHT 2005 ACS on STN
 AN 1997:137748 CAPLUS
 DN 126:155848
 TI Attachment, spreading and migration of melanoma cells on vitronectin. The role of **.alpha.vβ3** and **. alpha.vβ5 integrins**
 SO Experimental Dermatology (1996), 5(6), 308-315
 CODEN: EXDEEY; ISSN: 0906-6705
 AU Van Leeuwen, Robert L.; Yoshinaga, Iara G.; Akasaka, Toshihide; Dekker, Sybren K.; Vermeer, Bert Jan; Byers, H. Randolph
 AB Recent in situ studies suggest the **.alpha.vβ3 integrin** is a **tumor** progression marker in melanoma. We analyzed 5 human melanoma cell lines for their expression of the vitronectin binding **.alpha.vβ3** and **. alpha.vβ5 integrins** using flow cytometry. The role of these receptors in cell attachment, spreading and **migration** was investigated using attachment **assays**, video time lapse spreading and **migration assays** and with function blocking monoclonal antibodies. Cell lines derived from later stages of **tumor** progression exhibited high levels of **.alpha.vβ3** expression, whereas no similar correlation with **. alpha.vβ5** expression was identified. Cell attachment, spreading and **migration** response on vitronectin correlated well with the expression level of the **.alpha.vβ3** but not the **. alpha.vβ5 vitronectin receptor**. Blocking of the **. alpha.vβ3 integrin** resulted in a significant decrease in cell attachment, spreading and motility whereas the function blocking antibody against the **.alpha.vβ5 integrin** only **inhibited** cell attachment in cell lines with the highest level of expression of this **integrin**. Taken together, our study indicates that the level of expression of the **.alpha.vβ3** and **.alpha.vβ5 integrins** is heterogeneous in melanoma cell lines and that the **.alpha.vβ5 integrin**, if present, may function only during the initial cell attachment whereas the **.alpha.vβ3** plays an important role in cell spreading and cell **migration** as well.

L11 ANSWER 5 OF 98 CAPLUS COPYRIGHT 2005 ACS on STN
 AN 1994:677755 CAPLUS
 DN 121:277755
 TI A novel in vitro **assay** system for transendothelial **tumor**
 cell **invasion**: Significance of E-selectin and **.alpha.3**
integrin in the transendothelial **invasion** by HT1080
 fibrosarcoma cells
 SO Clinical & Experimental Metastasis (1994), 12(4), 305-14
 CODEN: CEXMD2; ISSN: 0262-0898
 AU Okada, Tomoko; Okuno, Hiroaki; Mitsui, Youji
 AB The interaction of **tumor** cells with endothelial cells is a key
 event in **tumor** metastasis. The authors established an in vitro
invasion assay system, in which the **invasion**
 of **tumor** cells after interaction with endothelial cells can be
 examined Two chamber culture wells separated by porous membrane were used.
 Human umbilical vein endothelial cells (HUVEC) were placed on porous
 membranes coated with matrix components. The **invasion** by HT1080
 fibrosarcoma cells was determined in this system by counting the number of cells
 that moved through the membranes from upper to lower chambers. HUVEC
 cells did not migrate through the membranes as judged by the staining with
 UEA-I. Observation by SEM revealed that HT1080 cells bound to HUVEC
 surfaces and migrated underneath the HUVEC monolayer. Effects of
 antibodies specific for cell surface adhesion mols. on the
migration of HT1080 cells were examined **Invasion** of
 uncoated membranes and membranes coated with HUVEC cells was compared.
 Antibody against E-selectin significantly suppressed an increase of HT1080
 cell **invasion** of HUVEC monolayers stimulated by IL-1 β or
 TNF.**alpha.** Antibody against **integrin .alpha**
.3 subunit remarkably **inhibited** the **invasion** of HUVEC
 cell-coated membranes, suggesting that **integrins** with the **.**
alpha.3 subunit may play an important role in the transendothelial
invasion by HT1080 cells.

L11 ANSWER 4 OF 98 CAPLUS COPYRIGHT 2005 ACS on STN
 AN 1990:588996 CAPLUS
 DN 113:188996
 TI Monoclonal antibody and synthetic peptide **inhibitors** of human
tumor cell migration
 SO Cancer Research (1990), 50(15), 4485-96
 CODEN: CNREA8; ISSN: 0008-5472
 AU Yamada, Kenneth M.; Kennedy, Dorothy W.; Yamada, Susan S.; Gralnick,
 Harvey; Chen, Wen Tien; Akiyama, Steven K.
 AB The processes of **migration** and **invasion** by human
tumor cells are likely to involve specific cell surface receptors,
 such as receptors for the extracellular matrix mols. fibronectin, laminin,
 and collagen. This study examined the roles of several of these receptors
 using a set of monoclonal antibodies directed against the $\beta 1$
integrin family, as well as a series of synthetic peptides
 reported to **inhibit** various interactions of each of these
 proteins with the cell surface. The most general **inhibitor** of
tumor cell migration was found to be the anti- $\beta 1$
 monoclonal antibody 13, which **inhibited** the **migration**
 of human HT-1080 fibrosarcoma cells, 5637 bladder carcinoma cells, VA13
 viral transformants, and HCT 116 colon carcinoma cells when fibronectin
 was the **migration** substrate. Moreover, this antibody was
 particularly effective in blocking cell **migration** on laminin, as
 well as **migration** within 3-dimensional collagen gels. It also
inhibited in vitro **invasiveness** in a reconstituted
 basement membrane **invasion assay** (Matrigel
assay) at concns. as low as 1 $\mu\text{g/mL}$. **Integrins** of
 the $\beta 1$ class thus appear to play a central role in several types of
migration by a variety of human **tumor** cell lines.
 Anti- $\alpha 5$ fibronectin receptor monoclonal antibody 16 also
 significantly **inhibited migration** on fibronectin, but
 not on other substrates, in 3 of the 4 cell lines. Conversely, anti- $\alpha 2$
 monoclonal antibody F17 strikingly **inhibited**
migration in 3-dimensional collagen gels, but not on other
 substrates, implicating the $\alpha 2\beta 1$ **integrin**
 system in **migration** of **tumor** cells within collagenous
 matrixes. A series of synthetic peptides previously reported to
inhibit interactions of normal cells with fibronectin, laminin,
 and collagen were also tested as **inhibitors** of **tumor**
 cell **migration**. Peptides containing the Arg-Gly-Asp adhesive
 recognition signal were partially **inhibitory**, but with
 occasional exceptions, most other peptides had no effects on
migration. The results indicate the central importance of several
 specific $\beta 1$ **integrins** in human **tumor** cell
migration and show the effectiveness of monoclonal antibody
 treatment in blocking this process in vitro.